Jean-Philippe Deschamps & Beebe Nelson

innovation governance

How Top Management Organizes and Mobilizes for Innovation

Foreword by Bill George

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Table of Contents

<u>Title page</u>

Copyright page

Foreword

Innovation My Experiences in Leading Innovation A Rigorous System of Innovation Governance Championed by Innovation Leaders

Preface: Why Should We Pay Attention to Innovation Governance?

Acknowledgments

PART I: Addressing the Innovation Governance Challenge

<u>CHAPTER 1: What is Innovation</u> <u>Governance?</u>

<u>The Innovation Management Challenge</u> <u>Defining Innovation Governance</u> <u>What Does Innovation Governance Entail in</u> <u>Practice?</u> <u>CHAPTER 2: Governing Innovation in</u> <u>Practice: The Role of the Board of</u> <u>Directors</u>

<u>Clarifying the Scope of the Board's Role in</u> <u>Innovation</u> <u>Reviewing the Company's Innovation Strategy</u> <u>Reviewing and Nominating the CEO and Top</u> <u>Management</u>

Selecting and Developing the Board for an Innovation Focus

<u>CHAPTER 3: Governing Innovation in</u> <u>Practice: The Role of the Top Management</u> <u>Team</u>

Setting an Overall Frame for Innovation Defining How to Generate Value from Innovation Choosing an Innovation Governance Model Establishing Innovation Priorities and Allocating Resources Overcoming Obstacles and Building a Favorable Innovation Environment Monitoring and Evaluating Results In Conclusion: A Call for Action

PART II: Choosing Between Alternative Governance Models <u>CHAPTER 4: Why Focus on Innovation</u> <u>Governance Models?</u>

Why Do Companies Need an Innovation Governance Model? What are the Key Elements of an Innovation Governance Model? The Governance System and an Explicit Constitution What Models Do Companies Use?

<u>CHAPTER 5: Innovation Governance</u> <u>Models</u>

Innovative Companies Deploy a Range of Governance Mechanisms

The Most Widely Used Innovation Governance Models

<u>The Top Management Team (or a Subset of It) as</u> <u>a Group</u>

The CEO or Group/Division President (in Multi-Business Corporations)

The High-level, Cross-functional Innovation Steering Group or Board

The CTO or CRO as the Ultimate Innovation Champion

The Dedicated Innovation Manager or Chief Innovation Officer

A Group of Innovation Champions

<u>The Duo (Complementary Two-person Team)</u> <u>No One in Charge</u> <u>Combinations of Primary and Supporting Models</u> <u>Additional Innovation-supporting Mechanisms</u>

CHAPTER 6: Which Models Seem to Work and Why?

Does Innovation Governance Work Satisfactorily? Are Some Models More Effective than Others? So Why are Many Governance Models Deemed Unsatisfactory?

PART III: Learning from the Field

<u>CHAPTER 7: Leading from the Top:</u> <u>Example 1 – IBM's Innovation Governance</u> <u>Model: A Succession of CEOs Oversees</u> <u>"Continuous Transformation"</u>

<u>Big Blue</u> <u>IBM's Model of Innovation through "Continuous</u> <u>Transformation"</u> <u>Governance as "Managed Anarchy"</u> <u>Embedding Discipline within Anarchy</u> <u>Learning from IBM</u>

<u>CHAPTER 8: Leading from the Top:</u> <u>Example 2 – Corning's Innovation</u> <u>Governance Model: Two Executive</u> <u>Councils Execute Hands-on Governance</u> Corning's Evolution: A Glass Factory Becomes a World Leader in Innovation

The Ages of Corning: A History of Supple

Governance

Defining the Core

From Success to Crisis: The Dot-com Downturn Building a Structure for Effective Governance Governing Corning's Medium-term Growth: The

<u>GEC</u>

<u>Governing Long-term Growth: The CTC</u> <u>Going Outside-In to Find What's Next</u>

Corning's Innovation Recipe

Patient Money: Investing for the Future

The Role of Information in Governing Innovation

Constantly Evolving Innovation Practices

Looking to the Future

How Will the Governance of Innovation Stay Fresh?

<u>CHAPTER 9: Appointing Individual</u> <u>Innovation Champions: Example 1 –</u> <u>Nestlé's Innovation Governance Model:</u> <u>CTO in Partnership with Business Heads</u>

The World's Leading Nutrition, Health, and Wellness Company

<u>Governing Innovation at Nestlé: The Nespresso</u> <u>Breakthrough Example</u>

Leveraging Nespresso: The Creation of an Incubator for Beverage Systems Nestlé's Strong Top Management Involvement in Innovation

Linking R&D to Innovation: The Key Role of the CTO

Addressing Nestlé's Critical Innovation Challenges

<u>CHAPTER 10: Appointing Individual</u> <u>Innovation Champions: Example 2 – DSM's</u> <u>Innovation Governance Model: The</u> <u>Entrepreneurial CIO</u>

<u>Going through Decades of Transformation at DSM</u> <u>Starting an Innovation Drive to Improve</u>

Innovation Excellence

Restructuring the Management of Technology and R&D

Mobilizing Innovators in Business Groups

Building a New Business Creation Infrastructure

Showing the Way at the Top

DSM's Outlook and Challenges: A Continued Focus on Innovation

<u>CHAPTER 11: Setting up a Collective</u> <u>Governance System: Example – Tetra Pak's</u> <u>Innovation Governance Model: High-level</u> <u>Cross-functional Steering Groups</u>

Innovation Governance – Stage 1: Predominance of the Owners Innovation Governance – Stage 2: Focus on Processes Innovation Governance - Stage 3: Empowering Management through Councils Finding a New Balance between Creativity and Discipline Exploring New Business Development Opportunities Addressing Future Innovation Challenges Drawing the Lessons

PART IV: Designing Your Own Governance System and Making It Work

<u>CHAPTER 12: Getting Started: How</u> <u>Michelin has Rethought its Governance</u> <u>Model</u>

A Long History of Innovation in Transportation Refocusing on Incremental Innovation, Emerging Markets, and Profitability

Taking the Helm and Refocusing on Product and Market Leadership

Setting Up a Corporate Innovation Board (CIB) Setting Up Other Elements of the Innovation Ecosystem

Anticipating the Next Steps

Going Public and Maintaining the Effort

<u>CHAPTER 13: Recognizing the Imperatives</u> for an Effective Governance System

Commitment and Engagement of the CEO and Top Management Team Breadth and Depth in the Scope or Coverage of the Model Independence of the Model with Regard to the Unique Talents of One Individual Ability of the Model to Gather Support from the **Organization** Inclusion of Checks and Balances and a Focus on Continuous Improvement Robustness of the Model vis-à-vis External Pressures and Crises Capacity of the Model to Evolve, Enlarge its Scope, and Grow with the Company Clarity and Accessibility of the Governance Model for the Board of Directors Auditing the Company's Innovation Governance Activities

<u>CHAPTER 14: Aligning Individual and</u> <u>Collective Innovation Leadership</u>

Do You Meet the Main Leadership Imperatives of Innovation? What is Your Own Leadership Model?

What is Your Own Innate Leadership Style?

How Do You Leverage Individual Talents to Create Effective Innovation Teams? Aligning Leadership and Innovation Governance

<u>Appendix: Examples of Tasks and</u> <u>Initiatives to Support Innovation</u>

1. Diagnostic and Continuous Improvement

2. Innovation Vision and Strategy

3. Innovation Content Management

4. Innovation Process Management

5. Organization and Infrastructure

6. Competencies and Attitudes

7. Climate and Culture

8. Allocation of Specific Management Responsibilities

<u>Index</u>

INNOVATION GOVERNANCE

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Jean-Philippe Deschamps and Beebe Nelson



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Foreword

Innovation

Many volumes of books and articles have been written on this subject, yet most organizations acknowledge they are not truly innovative in spite of concentrated efforts to become so. Back in 1997 HBS Professor Clayton Christensen wrote his seminal book, *The Innovator's Dilemma*, that described in lucid terms why organizations fail to innovate. Businesses, including my own, Medtronic, took his admonitions to heart, yet most established companies have been unable to move the needle on their efforts to become more innovative. I continue to be amazed at the number of outstanding companies whose leaders talk the innovation talk but fail to create innovative organizations or to come up with innovative business ideas.

In my experience, most companies fail to innovate for five fundamental reasons:

1. Lack of direct engagement of the CEO and clarity around leadership of innovation

2. Absence of a sound, well-established innovation process

3. Failure to distinguish clearly between science, product engineering, and innovation

4. Risk aversion and low tolerance for failure

5. Unwillingness to support innovation budgets during near-term performance shortfalls

World-class innovation expert Jean-Philippe Deschamps and his co-author, Beebe Nelson, have examined the larger scope of innovation and have discovered why companies fail to innovate. In their view two things are sorely lacking in organizations: leadership and governance. In his 2008 book, Innovation Leaders, Deschamps addressed the vital question of why innovation leaders are sorely lacking in most established organizations. He also addressed the question of what can be done to develop more innovation leaders who rise to the top of large organizations.

In *Innovation Governance*, Deschamps and Nelson scale new heights in taking the question of innovation leadership to a higher plane by focusing on the core reason for failure: lack of a well-established system for governing innovation. They challenge the reader to ask, why don't all companies who are striving to be innovative have a well-established system of governing their efforts and clear ground rules for carrying them out?

While scholars and practitioners like myself have argued for decades about whether the key is the innovation process or its leaders, Deschamps and Nelson neatly combine the two in their concept of innovation governance. However, their solution is not prescriptive. Rather than advocating a single governance model, they instead explore the full range of innovation governance approaches. Their 3×3 matrix model produces nine ways of thinking about the type of governance system you wish to establish for your company.

To provide depth and context to each of the nine models, Deschamps and Nelson examine the innovation structures of the world's leading companies and how they govern their innovation. By avoiding the one-size-fits-all approach so common in most treatises on innovation, they challenge innovation leaders to create their own approaches that will work best in their cultures and align with their business models and strategies.

My Experiences in Leading Innovation

Throughout my career I have seen innovation as the key to creating value for your customers, motivating your employees, and building growing businesses – all the necessary elements for creating lasting value for your owners and investors. In my early years in business my role models of innovation leaders were Hewlett-Packard founders David Packard and Bill Hewlett, Merck's Roy Vagelos, Louis Lehr of 3M and Medtronic founder Earl Bakken. In recent years, newer innovation role models have emerged, such as Dan Vasella of Novartis, Arthur Levinson of Genentech, eBay's Meg Whitman (now CEO of Hewlett-Packard), Apple's Steve Jobs and Google's Eric Schmidt.

I have never considered myself an innovator who invents products. Rather, I have tried to be a leader who leads and stimulates the innovation process to ensure the real innovators get the encouragement, support, mentoring, and focus they need to produce great innovations. Surprisingly, many CEOs and senior leaders of established companies who are eager for their companies to innovate nevertheless take actions repeatedly that prevent an innovative culture from emerging. For example, during budget season they are prone to trim back budgets for innovation projects rather than protect them, or they stand passively by as their business heads do so in order to meet pre-established targets or protect short-term product upgrades. Or they may be guite critical of innovations that do not materialize, often punishing the innovators who took the risks on their behalf. Other leaders fully fund their research and development budgets, but never engage the innovators themselves. Nor do they understand their own cultures well enough to know why they are not producing any genuine breakthrough products.

My first general management role dates back to 1969. My goal was to create the consumer microwave oven business for Litton Industries, a challenge I found highly stimulating.

At the time consumers didn't even know what microwaves were. If they did, most were afraid of potential radiation, as we weren't that far removed from stories of Hiroshima and Nagasaki. At Litton we used innovation in our products and marketing to turn the microwave oven from a popcorn popper to a widely used device that has become standard in most homes. Since neither consumers nor appliance sales people, most of whom were men, understood how to use the product, we hired 2,000 part-time home economists to conducting work retail. cooking at classes and demonstrations.

Sadly, when I moved to Honeywell in 1978, my successor at Litton focused almost entirely on getting product costs down and innovation dried up. In my Honeywell years, innovation became more difficult. This company of superb engineers focused primarily on generating better products and processes, not breakthrough innovations. The ring laser gyroscope that guides all aircraft today was a notable exception.

Joining Medtronic in 1989, I saw the opportunity to harness and expand innovation in a highly creative company that was using medical technology to restore millions of people to full life and health. Medtronic was filled with remarkable innovators and exceptional innovation leaders, yet the company's recent history had been characterized more by missed opportunities and notable failures in innovation. Win Wallin, my predecessor as CEO of Medtronic, revived the process by focusing on the implantable defibrillator, whose inventor had been rejected by Medtronic. However, a innovation had system for aovernina not vet been established within this predominantly functional organization.

To create the innovation governance system at Medtronic, we started with our board of directors. Between 1990 and 1996 Wallin and I took significant steps to add pioneering medical doctors and technologists to the Medtronic board, who ensured that the company's emphasis stayed laserfocused on innovation. The board established a technology and quality committee, which provided oversight, ideas and guidance to management. The T&Q Committee, as it was known, was very helpful in pointing out emerging technologies that management may have overlooked and examining the viability of technologies we were pursuing. The board wanted to ensure that the company never again overlooked an important medical technology as it had with the implantable defibrillator.

management standpoint, it was clear that From a Medtronic's innovation was not well organized, leading to haphazard results. To bring some clarity to the governance process, I decided to bifurcate the organization between established businesses organized around strategic business units (SBUs) and an innovation function that included new ventures, research projects, and external alliances. The existing businesses were run by chief operating officer Art Collins, who later became my successor. The innovative work was championed by vice chairman Glen Nelson, MD. Nelson was a brilliant physician with a keen interest in medical technology who was recruited from a pioneering health maintenance organization. The company's largest business, cardiac rhythm management (pacemakers and defibrillators), was led by an exceptionally strong innovation leader, Bob Griffin. Griffin had a long history within the company of championing breakthrough innovations, often reprogramming funds to keep them alive. For the next decade Nelson and Griffin drove Medtronic's innovation while Collins skillfully managed the SBUs. Both Nelson and Griffin were masters at scouring the world for new medical technologies being created by courageous physicians and entrepreneurs that we could bring into Medtronic.

During this period Medtronic innovators were successful in medical technology usina to create breakthrough innovations that addressed a wide range of complex like cardiac diseases sudden arrest. Parkinson's. atherosclerosis, heart failure, spinal disease, diabetes, and incontinence. All they needed from our top executive team was funding, focus, and a high level of engagement with their innovations. Not infrequently, Nelson, Griffin and I had to make organizational interventions to prevent the SBU leaders from shooting down their ideas before they had been developed or refusing to transfer the talent to them that were needed to make their innovation projects successful.

I recall one especially tense meeting involving a novel idea for minimally invasive cardiac surgery, also known as "beating heart" surgery. Since Medtronic sold one-third of all the heart bypass systems in the world, this invention was very threatening to our core business, whose leaders adamantly opposed going ahead with the venture. To bolster their case, they brought in several of the world's leading cardiac surgeons who opposed any designs that did not give them full visual access to the heart on bypass. In the end we proceeded with the new procedure, which today accounts for more than 20% of the world's bypass procedures and results in better outcomes at lower cost for patients. My assumption was that if we did not go ahead, a more innovative company would perfect the procedure and overtake Medtronic in the market.

In terms of metrics, Wallin established corporate goal in 1986 of growing revenues and profits by 15% per annum. To achieve this growth in markets expanding at only 6-8%, we recognized we had to create entirely new markets through innovation. Thus, we established a second primary goal that 67% of our revenues would come from products introduced in the past 24 months. This goal was especially challenging when compared with 3M or Hewlett-Packard, which had announced goals of 25% of revenues coming from products introduced in the past five years. The 67% was achieved every year from 1990 through 2006, when the innovation process slowed down. Realizing such an aggressive goal meant that Medtronic had to employ rigorous processes for product innovations complemented by separate processes for more speculative research into new medical therapies.

In analyzing the actual results during those years, it becomes clear that product innovations were responsible for the bulk of Medtronic's increase in market capitalization between 1985 and 2001 from \$400 million to \$60 billion. In the past decade the Medtronic's innovation culture has atrophied as Nelson and Griffin retired, and attention shifted away from new medical technologies to improving existing products with lower risk profiles.

Currently, Medtronic's system of innovation governance is being revived by new CEO Omar Ishrak, who has a clear mandate from the Medtronic board of directors. Ishrak, who was born in Bangladesh, is a pioneer in the process of reverse innovation - bringing innovations from emerging markets to developed markets. He gained notoriety for the invention of low cost ultra sound systems in Asia that enabled General Electric to capture the leading position in the United States and Europe. As CEO of Medtronic, he is focusing not only on product innovation, but also on innovation as model business а vehicle to expand Medtronic's opportunities in emerging markets. Ishrak has established a rigorous innovation governance system led by Medtronic's head of business development with regular reports to the board's T&Q Committee.

A Rigorous System of Innovation Governance Championed by Innovation Leaders

In their examination of the nine types of innovation governance models, Deschamps and Nelson offer convincing evidence that a variety of innovation governance models can be effective. Their insightful case studies, drawn from their work with some of the world's most innovative companies – IBM, Corning, Nestlé, DSM, Tetra-Pak, and Michelin – are not only revealing but inspiring. Their arguments on behalf of establishing an effective system of innovation governance are compelling and irrefutable.

This brings us back to the original question, why don't all companies who have a desire to be innovative adopt clear processes for governing their innovation? The answer, in my view, is leadership. To be successful, companies must be led by leaders – the CEO, top executives and board of directors – who are deeply and irrevocably committed to innovation as their path to success. Just making innovation one of many priorities or passive support for innovation are the best ways to ensure that their company will never become a great innovator.

As Deschamps and Nelson make abundantly clear, building and sustaining an innovative organization requires clearly established processes for governing innovation run by innovation leaders that are willing to devote substantial portions of their time and their political capital to the innovation process. They must be backed by a board of directors who is equally committed to innovation. These were the ingredients that made us successful at Medtronic. The same ingredients have led to the astounding long-term success of such innovation giants as 3M, IBM, Apple and Google.

In my experience sustaining innovation requires *both* innovation leaders and a rigorous system of innovation governance. One without the other is insufficient. Innovation governance without leadership from the top will ultimately wither as the immediate takes precedence over the important. Innovation leaders without a well-established governance process are too dependent on individuals and vulnerable to losing focus when those leaders move on, as we saw in the Medtronic case.

To reiterate Deschamps' and Nelson's fundamental conclusion, "The mission of innovation leaders is to steer and support innovators. Governing innovation means making sure that innovators have as smooth a path as possible, that their commitment and hard work payoff as much and as often as possible." Their advice is well worth heeding for every organization who wants to become innovative.

Bill George Professor, Harvard Business School and former Chair & CEO of Medtronic

Preface: Why Should We Pay Attention to Innovation Governance?

Innovation has always been with us, as companies have had to keep innovating to survive and grow. As a consequence, innovation management has been a much discussed topic over the past 30 years, both in management literature and consultants, in practice. Scholars. and company practitioners have studied it and argued at length about what companies need to do to become effective innovators. But we believe the challenge is now leaving the narrow realm of specialists to become a broader and vital general topic. Indeed. relentless technological management progress and global competition over the past decade have put innovation at the forefront of most top management agendas. In short, innovation is no longer a "nice-to-have" capability that needs to be developed, notably in R&D. It is increasingly becoming a core competence of corporations strategic effects, its disruptive because of its many complex and its cross-functional and character. multidisciplinary processes. As such it deserves top management attention.

Today's innovation focus tends to be on building a comprehensive market-oriented capability by systematically addressing all the pieces of the puzzle, with a strong focus process elements and cultural aspects. on In most companies all these elements have been somehow identified and assembled. Process management has been introduced. strategic portfolio So has management. Everyone agrees that an innovation-friendly culture and climate are essential. Customer management is also

recognized, and managers are now spending a lot of effort in clarifying the "fuzzy front end" of innovation. Companies with a strong orientation toward either bottom-up or topdown innovation are trying to balance their focus. In short, management teams generally know what to do, at least in theory, to make their company effective, and yet many are not managing to turn their company into sustained innovators. Something is obviously missing! In some companies, it may be a lack of will or consistency in addressing innovation imperatives. In others, resources may be scarce. In yet others, management systems may be inadequate. In most cases, however, the missing element seems to be a holistic approach to innovation, considering it as an integrated system and implementing all aspects simultaneously while remaining open to unexpected environmental and market changes.

In our experience, the main cause of these obstacles is a dearth of innovation leadership at the top. Often, the problem is caused by a lack of continuity in leadership, especially given the acceleration of changes in top management. CEO tenures are getting shorter and many companies are experiencing the impact of mergers, acquisitions, and reorganizations due to globalization, not to mention a succession of economic crises requiring constant restructuring. The book Innovation Leaders addressed this aspect by characterizing the key traits of innovation leaders and highlighting the importance of aligning leadership styles with specific innovation strategies. But individual leadership or leadership among a small group of managers does not suffice. Organizational leadership is needed. Companies need to embed innovation into a comprehensive corporate governance system. This means that business leaders need to identify and address all the fundamental questions regarding the deployment of innovation. They must propose a set of values and policies on innovation, review their formal allocation of responsibilities for innovation, and put in place adequate supporting mechanisms. Equally importantly, they need a diagnostic system to help them decide whether their chosen approach will lead to their desired objective.

In many ways, innovation has joined the list of the big corporate issues that landed on the top management agenda and required a coordinated corporate response. Total guality management reached that level in the 1970s and 1980s; lean manufacturing practices followed in the 1980s and 1990s; and sustainability and environmental management have become hot issues in the last decade. In all cases, management has had to recognize that these challenges transcended functional boundaries and needed to be addressed in a coordinated way at a high level. This meant establishing a set of overarching values, a range of concrete policies and initiatives to support these values, a pyramid of measurements, and an auditing process to follow progress at the top level and communicate results. Last but not least, it meant assigning oversight responsibilities, also at a high level. In short, these big scale issues triggered the need for a real governance mechanism, at board and top management levels. In this book, we suggest that the same is now true for innovation. Innovation governance is turning into a new corporate imperative.

Innovation governance provides a frame for all activities related to innovation. It is akin to a company's innovation constitution. As a constitution, it has four broad roles.

First, it sets out all legitimacy aspects by defining and limiting the roles of the various players in innovation, and notably (1) who is really in charge and owns the whole innovation process; (2) who is responsible for what part of this process; and (3) what legitimizes the allocation of responsibilities. Second, it establishes overarching goals for effectiveness and efficiency in utilizing resources and achieving results in terms of growth and competitiveness, and it specifies who decides on resource allocation.

Third, it proposes methods for handling conflict resolution, for example across functions and/or between business units and functions, and it specifies how complexity and ambiguity will be managed.

Fourth and finally, it pledges to guarantee the delivery of specific benefits to the various stakeholders – customers, employees, shareholders, and communities.

Innovation governance has to be consistent across the organization but adaptable to different parts of the process. It also needs to be future-proof, i.e. to adapt to new market, technological, and other external trends. In short, as a constitution, it needs to be amended from time to time to fit closely with the company's changing environment.

This book has been written by experienced innovation management practitioners to help you rethink your innovation governance system, i.e. to enable you to change the way you allocate overall responsibilities for innovation in your company. It aims to guide you in establishing mechanisms that will ensure continuity of leadership in spite your company's management changes and of in environment. It illustrates the main models of governance proposed with real examples from companies, highlighting some of the challenges and success factors behind each model. It is neither an academic book nor a prescriptive "recipe-type" book. It aims to trigger reflections in the top management team on a topic that has seldom been addressed explicitly, even in highly innovative companies. It ought to enable you to consider whether there are more effective models for allocating responsibilities for innovation than the ones you are using today, and it will guide you on how to implement them successfully.

In summary, this book aims to provide a holistic and systemic approach to (1) understanding what innovation governance is, what it means, and what it entails; (2) recognizing possible governance models and their advantages/disadvantages; (3) assessing and improving current innovation governance policies and activities; and behavioral aspects that (4) advising on will help management make its governance effective. It will look at the innovation governance challenge from the perspective of both the board of directors - i.e. how should the board exercise its governance duties in the field of innovation? and top management - i.e. how can senior leaders contribute effectively to the governance of innovation in their company given their own models of leadership?

In Part I, we shall start our innovation governance journey by characterizing the challenge. This means first clarifying the concept of innovation governance. Chapter 1 will do so defining innovation governance form of by as а organizational leadership at the corporate level that provides an overall frame for innovation. We shall describe the scope of innovation governance by listing the questions that it addresses, both on the content side of innovation and on the process dimensions. We shall recommend that management ensures a high level of congruence between these various governance aspects and that they are regularly reviewed and updated as the company goes through various phases in its development.

Talking about governance raises the question of the role of the board of directors in "governing" innovation. <u>Chapter 2</u> will address this question by recommending that the board be proactive and include an innovation aspect in each of its statutory governance missions. For example, the board should ask management to audit the company's innovation effectiveness regularly and to communicate its planned innovation strategy. It should require management to establish and monitor a set of key performance indicators regarding innovation and to regularly review the strategic risks linked with innovation. Finally, the board should ensure that new appointees – particularly in the CEO position – have the experience and talent to support the corporation's innovation focus.

Governing innovation is primarily a responsibility of the top management team. <u>Chapter 3</u> will list six areas where management initiatives are expected: (1) setting the frame for innovation, in terms of vision, mission, and values; (2) specifying how the company will identify, create, and capture value from innovation; (3) establishing priorities and allocating resources for innovation as part of an explicit innovation strategy and plan; (4) assigning primary and secondary responsibilities for innovation and setting up supporting mechanisms; (5) identifying and addressing current obstacles in the company's organizational system, as well as sources of resistance within the structure; and (6) monitoring and evaluating results continuously.

Our journey will continue in <u>Part II</u> with an exploration of different organizational models for assigning both overall and support responsibilities for innovation.

Chapter 4 will explain what we mean by innovation governance model and why it is important to reflect on possible models before choosing one. Indeed, companies often need more than one model; they combine innovation governance models by choosing a primary model for allocating overall responsibility for innovation and selecting one or several secondary models to support the primary allocating models go beyond model. These merely innovation responsibilities they convey a general management philosophy, since they define the level of involvement of the CEO and his/her top aides and the company's preference for centralized or decentralized innovation responsibilities.

Chapter 5 will describe a number of models in use today, as well as examining how widely they are used. In some models, overall responsibility is entrusted to a single leader, whether solely dedicated to the task or not. In others, it is allocated collectively to several managers. In yet other models, the overall mission to steer innovation is entrusted to a permanent organizational mechanism. Surprisingly, some companies have even opted not to assign innovation responsibilities to any specific individual or group. Besides these primary governance mechanisms, most companies established additional have mechanisms to support innovation. Many of them are simple replicas of the main models, focusing on a specific part of the company or its processes. We will recommend that the choice of model be based on a systematic review of alternatives and their pros and cons.

<u>Chapter 6</u> will raise the question of the perceived effectiveness or ineffectiveness of the various models – and the probable reasons – based on the results of a survey that we conducted. Indeed, companies express a rather mixed general assessment of their overall level of satisfaction with the innovation governance models they have put in place, definitely reflecting the need for a rethink! In fact, their level of satisfaction varies significantly according to the models they have chosen. In short, some models seem more effective than others, although no model scores better than 70% on effectiveness. We shall try to understand why all these governance models are deemed unsatisfactory in some cases and, for many, even in a majority of cases.

In <u>Part III</u>, we shall attempt to learn from the field and see how specific companies have chosen to organize for and lead innovation. We will highlight (1) how these companies have evolved and come to their current governance system; (2) the mission and characteristics of their system and the mechanisms they use to leverage their efforts; (3) what